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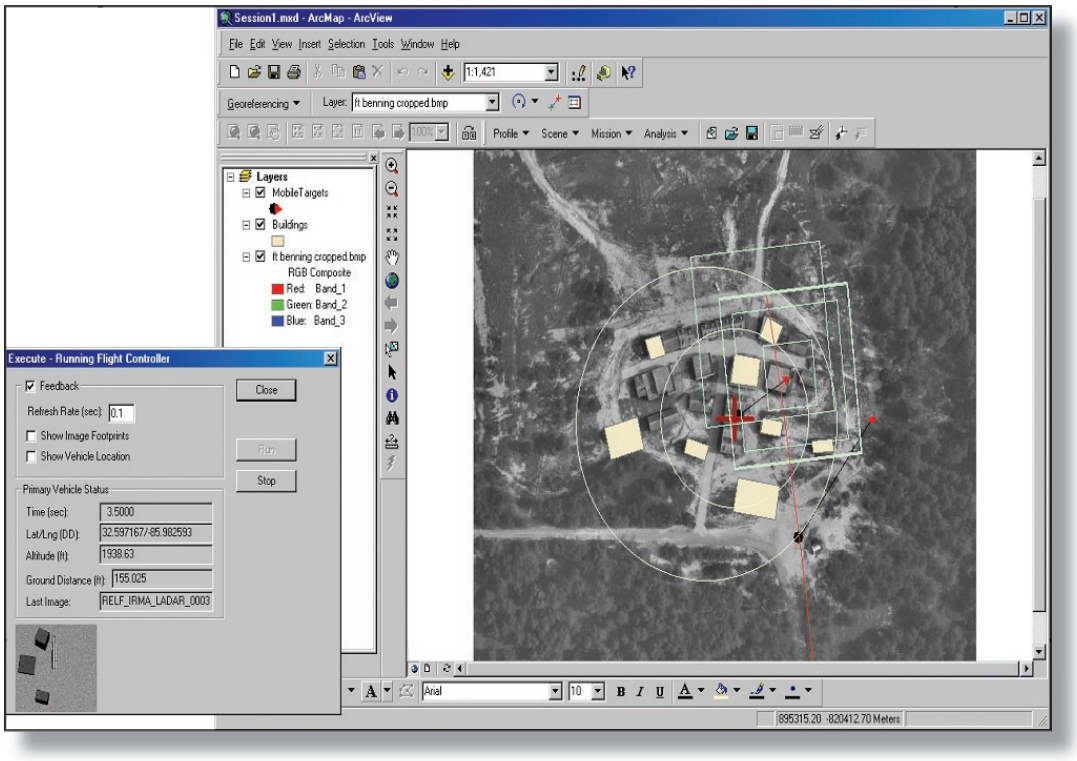
Success Story

SPACE VEHICLES DIRECTORATE DELIVERS ISMET SOFTWARE



The Space Vehicles Directorate's Integrated Sensor Modeling and Effectiveness Tool (ISMET) software package allows users to simulate advanced vehicle technology target scenes, sensor target acquisition, and effectiveness/lethality analyses.

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Accomplishment

Ballistic Missile Technology, working with Applied Research Associates, recently received the directorate's ISMET user's manual and software. Infrared, ladar, and synthetic aperture radar sensor models; ladar automatic target recognition (ATR); as well as ground-fixed and ground-mobile target lethality are available for the user. The terminal stage flight dynamics of the vehicle is included to search and acquire the target.

The main software runs on Windows® personal computers. However, directorate engineers designed the tool to run over a network and link to sensor models and ATR software located on other platforms since some of the tools are UNIX® operating system-based. Users can change the sensor or scene's characteristics to help determine the required sensor characteristics for the vehicle, target, and scenes of interest.

Background

The ISMET allows trade studies on sensor target acquisition and weapon effectiveness for advanced vehicle technology. The directorate developed the tool using commercial Geographic Information System software.

ISMET integrates several existing government and commercial off-the-shelf sensor modeling, ATR, and weapon effectiveness/lethality tools into a single cohesive product. Future plans for the tool include addition of more sensor models and ATR software, better flight dynamics, and more realistic scenes with clutter and terrain.

Space Vehicles
Emerging Technologies

Additional information

To receive more information about this or other activities in the Air Force Research Laboratory, contact TECH CONNECT, AFRL/XPTC, (800) 203-6451 and you will be directed to the appropriate laboratory expert. (03-VS-05)